Augusta, GA
Information Technology
Project Management
Guidelines

Table of Contents

Introduction

Purpose

This document is intended as a guide for the management of all major projects administered by the IT Application Group. This includes:

- Construction Projects
- Elections Support Projects
- Technology Implementation Projects
- Upgrade Projects
- Software Shutdown Projects

By no means is this the absolute authority, but it is a good guideline for developing a process by which new software is purchased. This is a hybrid document storing information in several ways: MS Office files, image format, and in hard-copy where necessary. The digital portion is included here and in related documents, and can be modified as necessary for the particular software that you are working on. There may be hard-copy information that you will wish to add in the sections of this document for historical purposes, etc, such as final copies of evaluation sheets or signature forms. These should be stored in a file folder marked with the name of the application, the vendor name, and the date.

Using This Manual

The stipulations that follow are general rules for the use and completion of this document.

- All documentation is expected to be completed as the project progresses.
- This document should be stored in the following locations:
  - Soft-copy information should be kept in the directories for project files as defined in this document under the section entitled Application Group Common Directory Structure.
  - Hard-copy information should be kept by the Project Leader in their personal project files (if the project leader decides to keep them since this is optional). Copies of the ***signature sheets*** should be provided to the Application Manager to be filed.
- The rigidity of the expected completion dates on the project schedule is depends on the following:
  - Does the user need this by a certain date in order to conduct critical business, meet a deadline from a third party, or start work based on temporal considerations (the beginning of a fiscal year, business cycle, etc)? If the answer to that is YES, then the completion dates are user-driven and are not negotiable by IT. Do NOT miss these deadlines.
  - Is this request by the user understood to be “whenever we can get to it”? Many users put requests in that are not critical, knowing that we will not be able to complete it for a long while. In this case, completion dates are variable.
  - If deadlines cannot be met, the developer must contact the Application Manager in order to request an extension. This should be in writing (email is preferable) and will be responded to in writing. If the request is reasonable, an extension will most likely be granted. In the case of user-driven deadlines, extensions are unlikely to be granted.
- Can I skip any documentation? Not really. The document needs to be filled out in its entirety, except when the information needed does not apply to the project (since this document is intended to be comprehensive there will be parts that will not apply to your particular project. Certain parts of the document may be abbreviated or altered based on the criteria below:
  - System Requirements
    - If a system already exists in another format (such as Access or another software version of a product that requires upgrade) the System Requirements may be abbreviated for the parts of the existing application. The requirements for these parts can read “Duplicate functionality of existing XXX Module” as part of the checklist. If this is the case, the forms, database structure, the actual program, etc. from the existing application should be close by during the entire development process.

        - If you abbreviate your checklist in this manner, then ALL of the functions must be duplicated except where the user indicates (in writing) that they agree that existing functions are no longer needed. Relaxing this requirement is meant to help ease the burden of documentation, not excuse you from it. In short, if your documentation says "duplicate the appraisal module from existing application" then your new program better do everything the old one did.
        - New features for existing applications MUST be documented in their entirety. For example, if a customer wants a new module, button, or function for an existing application, it must have its own separate line item(s) in the system requirements. Anything new does not fall under the caveat granted in the preceding item.
    - User Manual
        - If a project is simple data entry (add, modify, delete, report) and there are only a handful (3 or less) users, then the user manual may be reduced to a one-page "tip sheet" that explains what the application is, what it does, and how to start it up and shut it down. This is subject to approval by the Application Manager.
        - If the application requires any kind of annual processes (like calculations), billing, exports to other systems, etc. then all of these MUST be documented. Anything that is not simple add, modify, delete, and report has to be documented in detail regardless of the number of users.

It is understood that not all projects will fit neatly into the guide as it is set down here. While this document has many parts, additional comments and issues can be attached as necessary. Simply because there is not a specific box for a piece of information does not mean that it shouldn't be recorded. Add lines to the forms or add sheets to the document – whatever it takes to make it work for you.

Project Management Documents

The items below are documents, functions, and processes that the members of the Application Group need to be familiar with since they happen on a recurring basis. Many of these documents may move from the locations listed below if they are included in Information Technology's effort to implement document imaging in 2004-2005. This document will be updated to reflect those changes.

The sections below refer to other locations where documents can be found. The three key locations are:

1. The ITCommon\ApplicationGroup\3-Management\Project Management directory. This directory contains the templates needed to govern the project management process.
2. The ITCommon\ApplicationGroup\3-Management\Project Management\Project directory. This is the actual folder that will be copied to each Project area as projects are identified.
3. ITLibrary. This refers to the EDMS (Electronic Document Management System) **ITLibrary** application.

Due to the variety of projects that the Application Group must administer, a comprehensive document has been prepared that describes the process of managing them in our business environment. This document will never actually be finished since it is constantly under revision in order to incorporate new technology as it is researched and acquired. The same could be said of all the documents described in this section. As Project Management and the Augusta government environment changes, so will these documents. The master Project Management guideline document and associated files are located under ITCommon\ApplicationGroup\3-Management\Project Management.

> *Project Management Guidelines.doc* – This document provides a Project Leader with step-by-step instructions for tasks related to managing their project using the other templates that have been provided. This is the document that you are reading right now!
>
> *Project Mgt Decisions.vsd* – This is a Visio document that contains the Project Management Documentation flowchart shown above. It is a quick reference for answering questions related to which documentation to use.

The Project Management folder also contains a sub-folder called "Project" that contains the 9 areas described under the section of this document entitled *Application Group Common Directory Structure*. These should be copied and pasted in order to be used as a ready-made Application-Subproject folder. The FIRST file that the Project Leader opens at the beginning of a new project should be the Project Management Guide (the document that you are reading right now).

The key folders underneath the Project Management directory are *Elections Management, Construction Management, and Project.* These folders contain documents that will provide direction to members of the Application Group staff as they move through the implementation process for whichever type of project they happen to be involved with.

It may occur to you to ask "Why are these documents not located under ITLibrary?" The answer to that question is "because they change too much." These are living documents that are subject to alteration on a regular basis – they are evolving because there are so many subtle differences in what we do day in and day out. In addition, the directory structure cannot be maintained underneath ITLibrary, and one of the key reasons for creating a directory structure is to make sure that our project management files are organized. Without a predefined structure, files would be difficult to find except for the person that set up the structure. Considering the amount of correspondence, spreadsheets, test files, email, etc. that constitutes a project, using a predefined structure gives all of our files some degree of "findability".

The remainder of this document will help you determine the files that you need in order to set up and run your Augusta IT Projects more effectively.

Application Group Common Directory Structure

On the Novell server there is a drive mapped from all IT PC's as the "N:\," which is known as ITCOMMON. Beneath this N:\ there is a directory called "Application Group," which is where most of the files pertaining to the application group are located. It is currently subdivided into the following directories, shown with their descriptions below. NOTE: Other miscellaneous directories appear from time to time. These are usually temporary in nature and will not be included here.

Directory	Description
<year> APP Projects	Folder for annual project listings in MS Project.
1-Applications	Breakdowns of each application maintained / supported by the project group.
1-Applications\<Application Name>	Specific Application-related files.
1-Applications\<Application Name>\<sub-project>	Directory for sub-project for each application. These would be used to track work related to enhancements, upgrades, ongoing maintenance, etc. The template for this and the following directories (with other templates for specific files buried in the subdirectories) is located under: IT Library\App Group Development Guidelines\Project Management.
1-Mgt Docs	Project Management files.
2-Analysis	Files related to the analysis of the business problem.
3-RFP	RFP-related files, including the RFP itself and the evaluation documents.
4-Contracts	Contracts with the vendor related to this project.
5-Agenda Item	The agenda item and background documentation used to get approval. This also includes the approval letter.
6-Budget	Files related to the costs incurred on this project, including quotes, invoices, and tracking sheets.
7-Implementation	Information related to conversion, etc.
8-Technical Docs and Manuals	User Manuals, vendor documentation, etc.
9-Maintenance and Support	Files related to supporting this application.
1-Applications\<Application Name>\Maintenance and Support	Optional. Rather than store all of the files under a "9-Maintenance and Support", this master directory may be used to store information continuously instead of splitting it up among the different modules that may be installed. This is useful for handling support issues if you have implemented several versions of the software and you don't want to have multiple places to look for your support history.
2- Departments	Files pertaining to individual county departments.
2—Departments\<Department Name>	Specific Department folder. Example: "Tax Commissioner"
Correspondence	Letters, memos, etc. NOT related to specific projects (which would be stored under the "Projects" folder).
Equipment	Contains subfolders for equipment purchases, PPDs, etc.
Projects	Documentation related to projects done for this department (in subfolders, of course), that are NOT Applications – those would be under the 1-Applications folder described earlier.
3-Management	Files pertaining to management issues.
Disaster Recovery	Files related to priorities in disaster recovery.
Information Security	Files related to the security of our information and network.
Project Management	Project Management Template Directory.
Construction	Construction Management Documentation.
Elections	Election Management Documentation.
Project	Project Management Documentation.
Project	Project Management Document Templates.
Vendor Evaluation Guidelines	Guidelines for evaluating our vendor performance.
Budget	Budget Information.
CJIS Group	Criminal Justice Information System group files.
CodeBackups	Backups of code that is in development (in the absence of a test server).
Development	Programming / development information.
Financial Group	Financial group files.
GIS Group	GIS group files.

Directory	Description
IT Guidelines Archive	Old guidelines for application development (in-house and vendor) prior to movement of the "IT Guidelines" folder to the IT Library directory under ITCommon.
Mgt Group	Application Manager's folder.
OTG Software	Software related to the EDMS Enterprise Application.
Reports	General activity reports, etc.
Tax & Services Group	Tax & Services group files.
Training Requests	Application Group requests for training in certain fiscal years.
Wallpaper	Augusta, Georgia logo.

Each application group has its own subfolder where files pertaining just to departments and applications under its responsibility can be stored. These Group folders (CJIS, Financial, GIS, and Tax & Services) can further be subdivided at the discretion of the Project Leader as long as consistency and some sense of order is maintained.

File Maintenance and Archiving

There is no explicit archive plan for documents under the Application Group directory since many documents are ongoing in their scope. However, projects that have been closed out should be reviewed periodically, and if those documents are not needed, then they should be zipped, and then the uncompressed version deleted to conserve server space. Special attention should be paid to files that are not compression-friendly, such as images, so that they are not kept unless there is a legitimate business need for them. It is the responsibility of the project leader to review these documents for their relevance and act appropriately.

Failure to comply with this recommendation will result in the formulation of a strict archive plan.

Setting Up Your Project

Prior to selecting your documentation and setting up your project, you need to first start down a project management path based on the type of project that you are working on. There are three basic project types that the Augusta IT Department Application Group is concerned with: Technology Implementation, Construction, and Election Support. These are defined in the following sections, and it is graphically illustrated in the Project Document Flowchart at the end of this section.

Technology Implementation refers to the acquisition and implementation of new technology (hardware or software) or the upgrade of existing hardware and software whether it is supplied by a vendor or developed in-house. The scope of the original document from which this current document was derived was focused on software, but the overlap of technology has forced IT to consider "technology" as an entity independent of the traditional boundaries of hardware and software.

Construction Projects are new to IT since 2001 or so. Prior to that, very little construction had occurred for several years, but since then there have been several major and many minor construction projects that have required IT input. IT involvement is needed because almost every building requires some kind of computer cabling, which was not the case in years past. Major movements of personnel and/or equipment can also fall within this category.

Election Support is an important function that IT provides to the Board of Elections on Election Night and the period of time 1-2 months in advance of an election. Election support activities culminate in the presentation of maps and data related to election results on the city's web site on election night.

Software Shutdown is the process of turning off software that we no longer use. For instance, if we buy software from vendor Y, then the former system by vendor X would have to be decommissioned.

Project Leader Tasks

1. Determine the type of project that you are working on.
2. Choose your documents / directory structure and set it up according to the Application Group Common Directory Structure. This is as simple as copying and pasting while following these guidelines:
   A. For construction projects, go to #3.
   B. For election support projects, go to #4.
   C. For brand-new software (or brand-new software modules from the same vendor), go to #5.
   D. For an upgrade/extension to existing software, go to #6.
   E. For software decommissioning, go to #7.
3. Construction Projects
   A. Copy and paste the Construction directory from *ITCOMMON\Application Group\3-Management\Project Management* and paste it as a new folder under *ITCOMMON\Application Group\2-Departments\<Customer Department Name>* and name it with the year of the project and the building being built. Example: 2005-Recreation Maintenance Building. This will ensure that the project is sorted and kept in some kind of order after subsequent implementations start to make the directory crowded.
   B. Open your Construction Excel spreadsheet and proceed to the ***Project Links*** tab and fill out the top section of the form.
   C. Proceed to the section of this document entitled Construction Projects and carry out the steps outlined there.
4. Election Support Projects
   A. Copy and paste the Elections directory from *ITCOMMON\Application Group\3-Management\Project Management* and paste it as a new folder under *ITCOMMON\Application Group\2-Departments\Board of Elections* and name it with the year of the election and the name of the election. Example: 2005 Special Election. This will ensure that the project is sorted and kept in some kind of order after subsequent implementations start to make the directory crowded.
   B. Open your Election Support Excel spreadsheet and proceed to the ***Project Links*** tab and fill out the top section of the form.

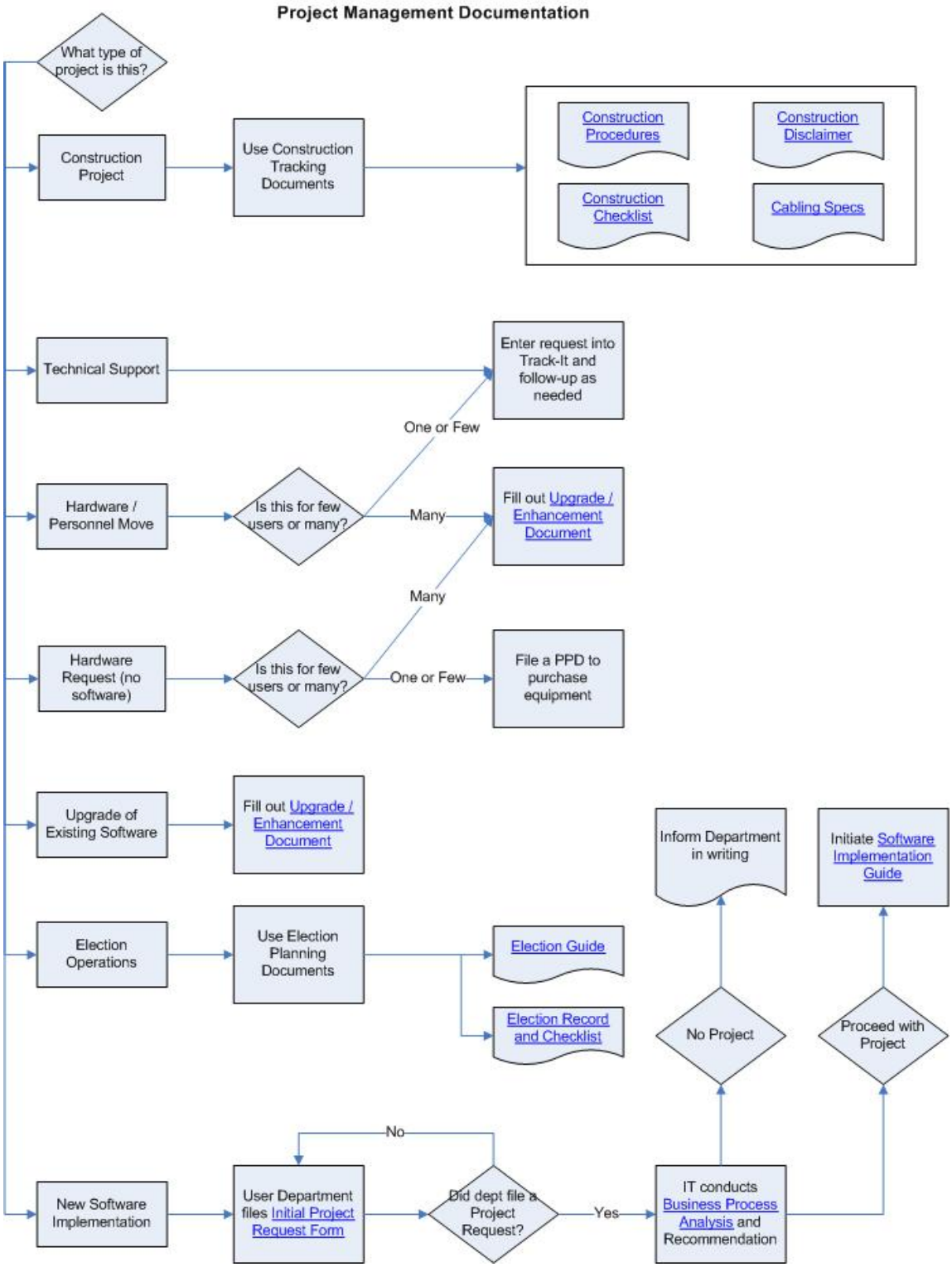
C. Proceed to the section of this document entitled Election Support Projects and carry out the steps outlined there.

5. New Software:
   A. Create a new directory under *ITCOMMON\Application Group\1-Applications* and name it with the name of the application and the vendor name. Example: enQuesta (Systems and Software).
   B. Copy and paste the Project Management directory from *ITCOMMON\Application Group\3-Management\Project Management\Project* into the folder named after the application.
   C. Rename the Project file with the year, the task, and the version of the software. Example: 2005-Hansen v8. This will ensure that the project is sorted and kept in some kind of order after subsequent implementations start to make the directory crowded.
   D. Open your project management spreadsheet (under 1-Mgt Docs), proceed to the ***Project Links*** tab and fill out the top section of the form.
   E. Proceed to the section of this document entitled Technology Implementation and carry out the steps outlined there.
6. If you are upgrading the software, moving it to a new server/platform, extending the number of licenses, the vendor is performing a new scope of work, etc., use the following steps to prepare:
   A. Copy the project management template directory to a new location under the *ITCOMMON\Application Group\1-Applications\<APPLICATION NAME>* directory. Rename it with the year of the upgrade/extension and provide it with a descriptive name. For example, if the previous version was 3.5, then you would rename the new product as such: 2005 New Software v4.0.
   B. Open your project management spreadsheet (under 1-Mgt Docs), proceed to the ***Project Links*** tab and fill out the top section of the form.
   C. Proceed to the section of this document entitled Upgrades and carry out the steps outlined there.
7. If you are decommissioning (shutting down) software, then use these steps.
   A. Copy the project management template directory to a new location under the *ITCOMMON\Application Group\1-Applications\<APPLICATION NAME>* directory. Rename it with the year of the shutdown and name it "<APPLICATION NAME> Shutdown". For example: 2006 TeamIA Shutdown.
   B. Open your project management spreadsheet (under 1-Mgt Docs), proceed to the ***Project Links*** tab and fill out the top section of the form.
   C. Proceed to the section of this document entitled Software Shutdown and carry out the steps outlined there.

An example of the general structure for the application directory would be as follows:

1- APPLICATIONS
    GBA MASTER SERIES
        2001 GBA 6.62
        2002 GBA 6.7
        2003 GBA 7.0
        2005 Accident Master Implementation
        2005 Utilities GIS Implementation

Project Document Flowchart



Construction Projects

Objective

This section exists to provide the IT Project Leaders with a guideline by which to plan for the construction of facilities that fall in their areas of responsibility. The use of technology (radios, computer hardware and software, telephones, etc) has far-reaching effects on the budgetary and structural configuration of new buildings. This guide attempts to smooth out the process for Information Technology professionals that are not familiar with engineering and architectural considerations.

A positive aspect of new construction of government buildings in this day and time is that most architects understand that technology will be included and design their buildings to accommodate it. This means that all hope is not lost if IT is not remembered until there is a foundation and walls standing at the building site – some of the things we need (conduit, technology closets, etc.) may already be in place.

Meetings and IT Involvement

Department Heads and/or committees that are discussing new construction should be advised in advance that IT must be included on planning meetings to ensure that technology is discussed. Even when a building is in the conceptual state, when no formal plans have been drawn up, it would be useful for IT staff members to be involved. For example, if a new Fire Station is to be put on a certain parcel of land, IT can research in advance to determine the cost related to running fiber to that location. Once concrete is poured for the foundation, it is really too late to be proactive about IT issues. At these meetings IT is expected to provide assistance to the staff/committee on all technical issues. The phase of planning/construction that the department is in will dictate how IT responds to a request for assistance. These phases are:

Conceptual/Planning Phase: This is the optimum time to get involved with a construction project because the department can be alerted to what they need to consider that is IT-related. At this point all of the potential IT costs can be brought out to them without fear of deadlines having passed or contracts being signed.

Design Phase: This is still a good time to get involved because the department is trying to figure out where staff members are supposed to go and they are wrangling with the architect to fit the most offices into the least amount of space. Since the planning is still going on, it is not too late to give the department advice on all of the IT costs, since the architects won't have returned with their final plan yet.

Construction Phase: It is almost too late for IT to do anything because many of the IT-related items (conduit into the building, etc.) may have already been laid and covered in concrete. If IT was not consulted, then the architect/builder may have used generic technology solutions which may not fit with IT's overall strategy for growth and consolidation of technology in the city.

Post-Construction Phase: At this point anything that IT does is retroactive, and we are in the position of making something fit when they may or may not be resources available. This is the least optimum time to get involved because there will generally be more costs heaped on to a project near the 0end when the department is running out of money and they are tired of the construction process anyway. IT can still present what needs to be done and at that point the architect/builder may be involved to determine how to retrofit technology as best as they can.

An important issue that should be resolved immediately is to provide the following documents to the department at the very FIRST meeting that an IT representative attends that is related to the new construction:

1. Construction Project Management Document – this document is the IT Project Leader's guide for managing the project and should not be given to the department except as information. The PL will need to walk through the steps described in the document in order to make sure that all issues relevant to the construction have been covered. Cooperation from the department is vital.

2. ARC New Building Cabling Specifications – this document is provided for the department to provide to their architect so that our cabling standards are established up front and questions can be minimized.
3. Construction Information Receipt and Disclaimer – this document governs the relationship between IT and the department, and makes provisions for our role and the responsibility that we will accept. This document is in place because too often IT issues have been pointed to as being the reasons for construction or occupancy delays, when the fault actually lay in budget issues or department non-compliance with IT requests. This form should be filled out (there are a few blanks on it) and then signed immediately. Until this document is signed, IT should not pursue any further work on the project.

Budget

On the government level, the proposal to build a new building is generally given as a ballpark figure without even consulting IT or other departments about specific details. For example, a new judicial center may cost anywhere from $70 to $85 million dollars depending on its location. With a $15 million spread, the cost of each computer jack or Cisco switch is likely generalized under "Data Processing" or "communications" costs. IT's preferred role is to look at the floor plan of the structure and build a plan for putting the technology into the structure, and to get the technology costs as close to the penny as possible. IT's general rules for developing budgets for new structures are as follows:

- A budget for a new building should NEVER be submitted until after IT has been consulted on the cost of the technology that should go into the structure.
- IT staff should not release ballpark figures for any major construction – details are very important.
- The department must be informed that the costs of the new structure are not just brick and mortar, but moving technology from their old site or routing network lines, etc. to their new site are also costs that must be considered. There is always a cost involved in moving technology.

Another important factor is "Who Pays?" In general, the department is responsible for all technology costs related to their new structure. This includes the extension of the network (fiber) to the new site, internal wiring, creation of Telecomm rooms, new hardware devices for desktop use, and network communications. Even though fiber is generally regarded as an IT-related item, IT is not responsible for the cost of running it to a new site.

Site Considerations

Geography

The site of any new government building is generally dictated by its function and available land, but technology considerations must be taken into account when a site is chosen.

- Elevation – many of the emerging technologies are wireless, and if a building is located in a depression instead of a hilltop, communications with other facilities will be affected if radio or wireless computer technology is requested. The elevation can be confirmed via a GIS map showing contour lines and the location of the new facility and the locations of other facilities that it needs to communicate with.
- Flooding – Areas that are flood-prone require special IT consideration because water will destroy computer equipment. If a building is built in a flood-prone area, the bulk of the IT infrastructure should not be on the ground level of the structure.

Location of the Building

The location of the building is important because of several factors:

- Distance from existing fiber/network – the farther out a building is, the less likely that it will be on an existing fiber line. If fiber is desired by the department, the cost of moving into this structure will be significantly increased. This can be checked via discussion with LAN regarding other facilities in the vicinity and what their connections are. If there is no existing fiber, T-1 may be the

only option unless the department is willing to spend a great deal of money. Our connectivity service provider will have to be consulted as well.

- Number of buildings – if this is a campus with multiple buildings rather than a single structure, connections between the buildings are an important budget item. In this case floor plans of each building and the locations of equipment must be procured.

Location of Radio Antennae

If a radio room or communications center is required, an external antenna may be needed. Considerations for external antennas should include: how to route the cabling from the interior to the exterior of the building, landscaping concerns for tower placement, and preexisting buried utility concerns for tower foundation placement.

Communications Considerations

The implementation of communications lines (phones and data) is of **CRITICAL** importance to the completion of the project. Timing is the most important part – if the department intends to move in to the new building on October 1, then the fiber/phone/T-1 lines must be in place prior to that so that they have voice and data communications at move-in. To do this, you as a project leader must assume that it will take at least 100 days to order and install all the necessary equipment, plus get our fiber/communications contractor to put the lines in. It will be very important during this time period to work closely with LAN and the Telecomm staff at IT. The move-in date for the building must be clearly established and the appropriate vendors must be motivated to beat this deadline. If all of the "Internal Technology Considerations" discussed below have been established in advance, then this process will be much simpler since we already know what the costs will be (new quotes will likely have to be drawn up to account for the lag between original budget time and the present day), but we should already know what needs to go into the building.

Internal Technology Considerations

The primary issues to consider within the building are:

Devices

- Placement of Printers (which offices will have them and how many?)
- Placement of Computers (which offices will have them and how many?)
- Placement of Phones (which offices will have them and how many?)
- Placement of Fax Machines(which offices will have them and how many?)
- Placement of networked copiers (which offices will have them and how many?)
- Location of "Communications Center", "Command Center" or "Radio Room". Any room that will have a large number of devices dedicated to video, phone, or computer communications will require special considerations such as extra Telecomm rooms, UPS units, etc. Users should be strongly encouraged to incorporate network infrastructure for future growth, such as placement of wall jacks in offices that may be occupied in the future, or to buy additional switches if they are near capacity on the ones that will originally be installed in the building.

IT staff must have a building plan from the department, with all of the features above marked, as soon as possible in the course of the project so that the cost of new PCs, phones, etc. can be provided as part of the building cost. The placement of this equipment also affects building cost, because the number of floors, distance, and the number of devices are determining factors in how many network devices must be purchased and emplaced.

Visio is an excellent application for capturing this information since it allows you to draw to scale and also has icons for printers, computers, servers, phones, etc. that you can add to the drawing to represent equipment placement. This is also useful in that the files can be exported and emailed to other parties for review. Most architects will be using AutoCad (or a similar high-end CAD application). See if they can export in a format that Visio can read and if they can import from Visio.

Applications

A parameter that defines the type of network connections that will be used is the software usage planned for the building. The matrix below lists several hardware and software "enterprise"- type applications and their requirements as far as network connectivity is concerned. If the applications for the department in question are not illustrated, then they should be tested to ensure that they work.

Software/Function	Fiber	T-1	ISDN	VPN
Voice-Over-IP	Required	No	No	No
MS Outlook (email)	OK	OK	OK	OK
Network Drive	OK	OK	No	No
EDMS	Preferred	OK	OK	No
IFAS	OK	OK	OK	OK
GBA	Preferred	OK	No	No
Other Software (test and add to this list as necessary)				

Required – User MUST have this level of connectivity.
Preferred – IT would prefer that the user has this connectivity, but it will work with a lower level.
OK – Applications work with this connectivity.
No – User cannot have this level of connectivity and still use the application.

Network/Communications Equipment, Power, and Cabling

Any architect or engineer working with Augusta should be provided with a copy of the *ARC New Building Cabling Specs* as prepared by the IT Technical Group. These have explicit technical specifications regarding conduit, receptacle boxes, jacks, cables, wiring types, mounts, hardware part numbers, etc.

Project Leader Tasks

1. Attend meetings with the department regarding the new construction.
2. Use the Construction Project Management spreadsheets to record the steps of the project that have been satisfied, the equipment that must be moved, etc. The spreadsheets are straightforward and contain explanatory text, so this should not be overly challending.

When is this Project Complete?

A construction project is generally considered to be complete when all IT equipment is located in the building at its assigned location and its operational status has been verified.

Election Support Projects

IT is responsible for assisting the Richmond County Board of Elections with their technical needs on Election Night and the time period leading up to the election. This involves mapping, web site preparation, presentation room setup and monitoring, GEMS server technical support, and general support of radio, telephone, and network as needed. This is usually a high-profile exercise and requires advance planning.

To assist in planning, documentation has been prepared to assist the project leader with Election management. There are three files that can be used for reference:

> *Election Guide.xls* – This is an independent MS Excel worksheet which consists of standardized questions to ask and tasks to complete in the course of preparing for an election.
>
> *ElectionMaps_Documentation.doc* – This document describes the process of getting maps to the web site for election night viewing.
>
> *Election Procedures.doc* – This is an overall guide that describes in detail the programming that has gone into preparing for election night.

Project Leader Tasks

1. Attend meetings with the Board of Elections regarding the upcoming election.
2. Use the Election Guide spreadsheets to record the steps of the project that have been satisfied, the equipment that must be moved, etc. The spreadsheets are straightforward and contain explanatory text, so this should not be overly challenging.

When is this Project Complete?

An Election Support Project is generally considered to be complete the day AFTER an election when the Augusta web site has been reset to its pre-election look and the provisional votes have been added to the totals.

Technology Implementation

This section applies to the acquisition and implementation of new technology (hardware or software) or the upgrade of existing hardware and software whether it is supplied by a vendor or developed in-house.

Documents

The documents that describe this process development process and its associated documents are addressed below in detail. More time is spent discussing these than construction or election projects since these are much more complex and have many variations in the way they can be handled.

Project Documents

Technology Implementation Guide.xls - The development guide is intended to permit Augusta IT to manage implementation and development projects more effectively by providing guidelines for project leaders to follow in their planning process. This guide is found under *ITCommon\ApplicationGroup\3-Management\Project Management*\Project in the 1-Mgt Docs folder. This document has several tabs that direct the Project Leader and Application Developers in the planning and execution of projects. Once copied to an Application or Project folder, this can be edited to custom-fit any project (you can delete tabs that don't fit your project!) For example, if you are developing in-house, you can delete the tabs related to RFPs and vendors, among others. The default tabs are described in the chart below:

Worksheet Tab	What it Does
Title	Title page for printout purposes.
Project Links	A page that contains links to the tabs for each item. This provides the user with a quick way to go to any sheet without having to hunt through the tabs at the bottom of the page.
Project Proposal and Analysis	A tab that contains pre-set forms for recording the user's request and then analyzing the business processes and problems to determine a course of action.
Upgrade	Generic tasksrelated to upgrading from one version of a software package to another.
Development Tasks	Generic tasks related to in-house software development.
Implementation Tasks	Generic tasks related to implementing a vendor-developed/purchased system.
System Requirements	A page pre-filled with some IT-required documentation (that is relevant for all implementations) and with empty spaces for recording the user requirements that will be put in an RFP or used to govern the development of a system.
Selection and RFP	Information related to the release of an RFP.
Vendor Eval and Choice	A sheet that permits recording of information about the vendors that responded to the RFP and how they compare to one another.
Project Team	A simple sheet that provides a template for the Project Leader to record the contact information of personnel that are working on this project.
Issues Log	A place to record issues/problems that come up in the course of a project.
Project Budget and Cost	A very detailed form that permits the Project Leader to track all of the budget items related to this project and determine at a glance how much has been spent, how much is remaining, and which purchase orders, object codes, etc. were used.
Approval Signature Form	Forms that the users should sign at different steps of a development project.
Meeting Record	A form that is used to record meetings held about this project. It includes two types of forms: one that is a general meeting log and another that permits detailed record-keeping about the meetings.
Implementation Planning	Forms for performing detailed tracking of testing and training.
Post Project Eval	This form is the last step in the project since it allows the project leader to evaluate the team members, the vendor, and the manner in which the project was conducted. This is to be used for constructive, educational purposes rather than punitive ones.
Admin Tables	The project leader should not edit this page. It is reserved for storing the contents of drop-downs, etc. that are needed elsewhere in the Excel worksheet.

Programming Guidelines.doc - This contains the programming guidelines as established by the developers of the Application Group. This document is located under "ITCommon\IT Library\App Group Programming Guidelines." All development projects should be governed by the standards established in that document to ensure consistency in the look and feel of applications as well as the behind-the-scenes work related to programming in the Visual Basic and .NET environment. The Project Leaders will have little use for this but it is a "must read" for developers.

Project Management Tasks.mpp – This is a MS Project file that contains many of the same steps that are found in the Implementation Tasks tab in the Technology Implementation spreadsheet. It can be used as a template to set up a project if the Project Leader is comfortable with MS Project. If a decision is made to use this template, then the Project Leader should change the hyperlink under the Technology Implementation Guide "Project Links" tab to reflect the new location of the implementation tasks.

Upgrades

Many of the projects that are administered by the Application Group are upgrades or enhancements to existing systems. Due to the similarities between upgrades and implementations (depending on the scope of the upgrade, of course) upgrades are treated the same as Technology Implementations. These can be managed by using the Technology Implementation Guide spreadsheet. There is a worksheet entitled "Upgrade" which can be adapted to fit upgrade projects. If this project is an upgrade, then many of the other forms in the documentation can be deleted.

Project Setup Tasks

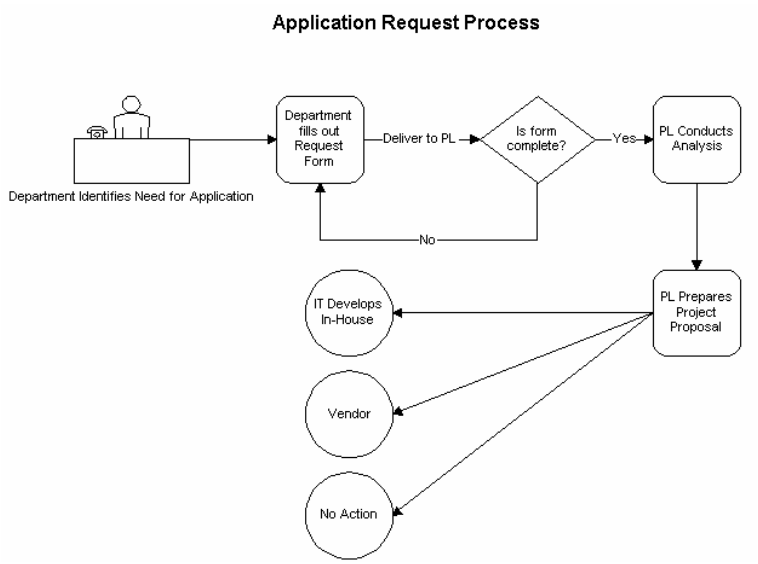
At certain decision points, the reader will be directed to other sections of this document depending on the type of project that they are working on. Text that is in ***bold italics*** below indicates a tab name in the Technology Implementation Guide MS Excel worksheet.

1. Software Research
   A. If this project is for NEW software and the user is unfamiliar with the concept, then it will be useful to conduct research into the software (and vendors) that have product offerings in the area of need. Compose a list of vendors.
   B. Locate information from all possible sources such as the Internet, references from other cities or counties, etc.
2. Familiarization Demonstrations. It may be necessary to organize one or more demonstrations of a particular type of software to provide the user with a base upon which to build their knowledge about what is available. For example, if they are moving from a paper system to a digital system, demonstrations will be critical to familiarizing them with the technology. Demonstrations can be organized by doing the following:
   A. Try setting demonstrations in one week or spread out over 2 weeks. This will allow everything to be fresh in the users' minds.
   B. Find out a good time for the users for the demo and locate the place for the demos to be held.
   C. If the vendor wants use remote access, please make sure arrangements are made with LAN in advance and the vendor will be using our standards of PCAnywhere or WebEx.
   D. The time of the demo will depend on the capacity of the system. Please try to limit them to less than 3 hours.
   E. The demos should be first thing in the morning or beginning at 1:00. Do not schedule a demo to begin during lunch hours or to extend from the morning past 1:00.
3. Analysis - Department staff and IT will jointly prepare an analysis of the department's needs, to include costs and benefits for the department. All steps under this item can be found in the ***Project Proposal and Analysis Tab.*** In general software development parlance, this is known as the "Analysis" phase of development, although this focuses on the business processes of the office. More detailed software-needs will be determined later.
   A. The Business Process Analysis may include the following steps.
      1). Present the concept of the Business Process Analysis to the staff.

2). Obtain an organizational chart of the department.
3). Conduct Workflow analysis using the Workflow Discovery Form.
   a) Why does the office exist? What does it do? Identify the key processes and create a flowchart for them, see how they connect, see where they diverge, see where different processes overlap.
4). Determine the jobs in the office (NOT what the job descriptions say – determine what they actually do). Break the job down into its component tasks using the Job/Task Form. How often are they done? Are they mandated by law? Is automation involved at all?
5). Evaluate the existing technology in the office using the IT Project Evaluation form.
   a) What kind of database do they use? How large is it currently?
   b) What kind of network connection do they have?
   c) What software is running in the office? Does it handle all of their needs?

4. IT Proposed Solution – This is the final result of the work in the preceding sections: What do we at IT propose to do to resolve this situation? We present all of the options in the "Options" section, but this explains which one is the best and why. An analysis of pros and cons of each option is useful here. Cost can also be discussed here. There are three solutions, although there can be myriad options within each.
   A. Implement In-House Solution: Develop an application in-house. If the application can be developed in-house and can be worked into IT's project schedule, development will proceed according to the section of this document entitled In-House Software Development.
   B. Purchase an application from a vendor. If this is the recommendation, then work can start using the process defined in the section entitled Vendor Software Acquisition.
   C. No application will be developed. This will not be taken lightly, and is likely only to occur when there are several good reasons for it. These reasons will be explained in detail to the department.
5. Present the solutions to the Application Manager and IT Director. Make changes as necessary.
6. Present the solutions to the customer department personnel.
7. Start the project or close the request accordingly.

The overall process is diagrammed as follows:



In-House Software Development

By this time the decision has been made to proceed with the project as an in-house development initiative. The process will be described in general terms since each project will have differences depending on user requirements and the technology available. Text that is in ***bold italics*** below indicates a tab name in the *Technology Implementation Guide* MS Excel worksheet. Assignment of the tasks below is to be done at the discretion of the Project Leader. It is the Project Leader's responsibility to ensure that the documentation is kept up to date by the staff.

Project Management Tasks

1. Conduct Detailed Business Process and Requirements Analysis
   A. Meet with the user to determine the functional needs of the software.
      1). The user should provide two documents to IT to assist in this process: a procedural manual which describes their workflow processes, and system requirements derived from those processes. These should already be present to some extent in the ***Project Proposal and Analysis*** tab. The detailed system requirements used to form an RFP or user functionality checklist will be recorded in the ***System Requirements*** tab.
      2). If the user has not prepared the documents described above, it is our duty to assist with the preparation. The key point to apply here is that the user should be responsible for doing this work – not IT.
   B. Form Analysis Documentation based on these requirements. These should all be in the ***System Requirements***.
      1). Document Security needs such as Inquiry access and the various security needs of each employee in the department.
      2). Document the reports that will be needed.
      3). Document any need for conversion of data. If so, review the actual data and format.
      4). Determine what will be needed to implement the system, including the cost of any licenses, third party software, and equipment. This will go in the ***Pre-Project Budget*** tab.
   C. Present the plan to the Application Manager for discussion and approval.
   D. Present the plan to the Department Head for approval.
2. Open the Technology Implementation Guide. If you like you can delete the following tabs since they are not needed with In-House development:
   A. Upgrade
   B. Implementation Tasks
   C. Selection and RFP
   D. Vendor Eval and Choice
3. Go to ***Development Tasks*** and fill out Section 1.0 with Administrative information.
4. Skip Section 2.0.
5. In Section 3, you'll need to review the hardware and software issues that may come up in the course of this project. Section 3 is for database and OS issues on the servers. The Pre-Project Budget tab has space for documenting the hardware and software that will need to be obtained for this project.
6. Design
   A. Design schema of system to include the following:
      1). Tables
      2). Relationships
   B. Complete the Database Dictionary form
   C. Design initial from layouts, displaying all required fields.
   D. Present the design to the department for approval. Record this on the appropriate ***Approval Signature Form***.
7. Development
   A. Schedule time with System Administrator to construct database.
   B. Write the application.
   C. Develop initial reports.
   D. All reports must include the following:
      1). Date
      2). Time

3). User Name Printing Report

8. Quality Assurance Testing
   A. Arrange meeting with the Director and the Application Manager to review the application prior to any release/review by staff from the department.
   B. Meet with the department to review the application and determine if the functionality meets their needs.
   C. Prepare a Testing Plan that details the features that need to be tested and the personnel that will be doing the testing. Use the ***Implementation Planning*** Tab.
   D. After testing, record the problems in the ***Issues Log*** and make any necessary changes and review the changes with the department.
   E. Verify security, reports and converted data, if applicable.
   F. Obtain signature of Department Head on "Pre-Implementation System Approval Form" on the ***Approval Signature Form***.
   G. If necessary, return to Phase 3 and re-do the second step.
9. Implementation
   A. Prepare an Implementation Plan that details the method of conversion, dates for all activities, personnel requirements, and equipment needs for the implementation. Use the ***Implementation Planning*** Tab.
   B. Design manuals & finalize all documentation.
   C. Conduct Training. Record attendance and results on the ***Implementation Planning*** Tab.
   D. Install application on all necessary machines.
10. Post-Implementation
   A. Confirm operation of software to specifications.
   B. Confirm 30 days of operation in which errors are corrected.
   C. Obtain signature of Department Head on "Pre-Implementation System Approval Form" on the ***Approval Signature Form***.
   D. After signature, software will transition to maintenance mode.
11. Operations
   A. Monitor the system and schedule a follow-up meeting with the department, within 2 weeks, to verify all needs were met.
   B. Prepare an After Action Report that describes what went wrong with the implementation and what went right. This is not for punitive purposes – rather it is a tool for future improvement.
12. Maintenance and Modifications
   A. Maintenance is classified as any change to the program that corrects functionality that was in the design specifications but is somehow not working properly. Modifications are changes to the program that enhance its capabilities somehow. All of these requests are handled via the Modification Request Form included with the Project Management Template. These REQUIRE the Department Head's signature or e-mail notification from the department heads. Maintenance Requests will be handled with high priority, and modifications will be handled as soon as they can be worked into the schedule.
   B. IT Staff: Modifications are recorded in two places – first in the overall Modification list found in the appendices of the In-House Development Outline, and then the individual modifications forms that follow. For every entry in the overall list there should be a corresponding form that details the modification that was made.

Note: All documentation should be imported / scanned into the EDMS. Signature forms should likewise be scanned, and copies provided to the Application Manager for filing. It is also recommended that the Project Leader keep a copy.

Vendor Software Acquisition

This section is intended as a general guide for the process of researching, purchasing, and implementing software from vendors. This section was once longer than it is now, since much of the documentation that is common to the entire IT Department (Agenda Items, RFPS, etc.) was taken from this document and put into the IT Standard Operating Procedures (SOP). The process will be described in general terms since each project will have differences depending on user requirements and the technology available. The process refers to the project documentation in the following manner:

- Text in ***bold italics*** below indicates the name of a spreadsheet.
- Text that is in *italics* below indicates a tab/worksheet name in the ***Technology Implementation Guide*** MS Excel spreadsheet.
- Text that is underlined refers to a section within a particular worksheet.

Situations where the reader needs to refer to the IT SOP are noted below. Assignment of the tasks below is to be done at the discretion of the Project Leader. It is the Project Leader's responsibility to ensure that the documentation is kept up to date by the staff.

Project Management Tasks

1. Open the ***Technology Implementation Guide*** spreadsheet. If you like you can delete the following tabs since they are not needed with a vendor software implementation project:
   A. Upgrade
   B. Development Tasks
2. Conduct Detailed Business Process and Requirements Analysis
   A. Meet with the user to determine the functional needs of the software.
      1). The user should provide two documents to IT to assist in this process: a procedural manual which describes their workflow processes, and system requirements derived from those processes. These should already be present to some extent in the *Project Proposal and Analysis* tab. The detailed system requirements used to form an RFP or user functionality checklist will be recorded in the *System Requirements* tab.
      2). If the user has not prepared the documents described above, it is our duty to assist with the preparation. The key point to apply here is that the user should be responsible for doing this work – not IT.
   B. Form Analysis Documentation based on these requirements. These should all be in the *System Requirements*.
      1). Document Security needs such as Inquiry access and the various security needs of each employee in the department.
      2). Document the initial reports that will be needed.
      3). Document any need for conversion of data. If so, review the actual data and format.
   C. Determine what will be needed to implement the system, including the cost of any licenses, third party software, and equipment. This will go in the *Pre-Project Budget* tab.
   D. Present the analysis to the Application Manager for discussion and approval.
   E. Present the analysis to the Department Head for approval.
3. Go to *Implementation Tasks* and fill out Section 2.0 with Administrative information.
4. Fill out Section 3.0, Budget and Approval, as needed. This section describes the process required to get approval of the project.
   A. Bid Process
      1). If the software is less than $10,000, then the bids and scopes of work will be relevant. You can delete all the rows in the Bid Process section if the software cost is >= $10,000.
   B. RFP and Commission Approval
      1). The steps for dealing with an RFP situation are found under RFP and Commission Approval Process. Instructions for writing an RFP are found in the IT SOP. Your RFP must include the items that are indicated under Vendor Evaluation and Selection: Final RFP Review on the *Implementation Tasks* tab. These are included in the default IT System Requirements listed under the *System Requirements* tab.

2). There is a tab entitled *Selection and RFP* that contains forms for recording the RFP Checklist (information about the RFP), Selection Team (the people involved in picking the software), and the Respondents to the RFP (the vendors).
3). The *Vendor Eval and Choice* tab contains sample scorecards that the Selection Team would use to rank the vendors. The very bottom of this form has a section called Vendor Choice where you can input the name of the lucky vendor. Remember as you are going through the RFP process to check back with your *Implementation Tasks* tab to update as needed.
4). Once the vendor is chosen, the task of negotiating contracts begins. The steps in this process are identified in the IT SOP, and milestone events are located in the *Implementation Tasks* tab under Contract Negotiation.
5). After contract negotiation is complete, the Commission Approval process concludes with the action of the commission. Record dates and results on the *Implementation Tasks* tab.

C. The *Pre-Project Budget* is a sheet that exists for the project leader to make estimates of what a project will cost. For instance, you can copy and paste different scenarios to see what they will cost. This is not to be confused with the *Project Budget and Cost* tab, which is for tracking actual project expenditures. Copy and paste the hardware and software that you put in the *Pre-Project Budget* tab to set this up. The four left-most columns on this sheet are identical to the ones on the *Project Budget and Cost* sheet, so you can copy and past them when you are ready to move to the actual project.
D. Overall, Section 3.0 is pretty straightforward. As tasks are completed, you need to check them off the list. See the Application Manager for assistance and clarification. You will need to refer back to Section 3.0 many times until the project is actually approved by commission.

5. Implementation Start-Up
   A. Once we have the Commission approval letter in hand, the items in the *Pre-Project Budget* can be moved to the *Project Budget and Cost* tab – this is a live project now.
   B. Based on the amounts in the *Project Budget and Cost* tab, funding can be moved into the relevant object codes. Supply the object codes and amounts to the IT Business Manager.
   C. Prepare a PPD for the hardware and file it so that the equipment will be available prior to training.
6. Problems and Issues that come up in the course of the implementation can be recorded in Section 6 of *Implementation Tasks*. This will give you a quick reference for pre-implementation issues. Section 6 is for overall management issues – NOT technical problems. The technical problems that are encountered should be recorded under the tab entitled *Issues Log*. This tab will become the basis for future maintenance and support issues so that we'll have all of the technical problems with a product in one place for quick reference.
7. Detailed Implementation Planning. Section 6.0 of *Implementation Tasks* has subsections devoted to the following areas so that you can prepare an Implementation Plan that details the method of conversion, dates for all activities, personnel requirements, and equipment needs for the implementation. Most of these have additional forms located under the *Implementation Planning* Tab. These will not all be used for every project, but they are present to give you a template of how to manage the most challenging, problem-prone parts of the project: conversion, testing, and training.
   A. Hardware and Software Acquisition
      1). Hardware
         a) All of the necessary hardware must be ordered so that it will be here by the implementation date.. Hardware may take up to two months to come in, so order it three months in advance so that it can be inventoried and tested in advance.
      2). All of the necessary software must be ordered so that it will be here by the implementation date.
      3). PCs and other equipment must be compliant with our network communications equipment so that program operation is not slow or otherwise hindered.
      4). The server must be ready in advance of the application.
      5). We must have a license for the server operating system.
   B. Software
      1). Software must be certified for the destination PC Operating System.
      2). Software installation procedures must be documented and delivered to the Project Leader prior to the implementation date.
      3). There must be sufficient licenses for the software AND its database present prior to implementation.
   C. Conversion. See *Implementation Planning* tab.

D. Quality Assurance Testing. See *Implementation Planning* tab.
E. Training. See *Implementation Planning* tab.
F. Deployment. There are several tasks listed related to the efficient deployment of this software. It is to our advantage to seek a way to deploy without having to perform X number of installations in the field.
G. Go Live. This is a generic checklist of the items that should be completed prior to go-live. There are no specific tasks here, just a quick "is this done?" review of other major sections.
H. Project Tasks. The vendor will likely have prepared an implementation plan of their own. You can either link to their file or copy their milestones into the *Implementation Planning* tab under Project Tasks.
I. Project Acceptance. This is a checklist of the items that need to be completed in order for the software to be accepted by Augusta.
J. Maintenance and Support. This is a checklist of the items related to ongoing maintenance that require completion before we can consider this project to be closed.

8. Carry through with the details covered under *Implementation Planning* as needed.
9. Follow up on your *Implementation Tasks* frequently.
10. Implementation
    A. Follow the acceptance criteria that are listed under Project Acceptance. These are generally:
        1). Confirm operation of software to specifications.
        2). Confirm 30 days of operation in which errors are corrected.
        3). Other provisions as set out in the contract.
    B. Record problems in the *Issues Log*.
11. Conduct Post-Project Evaluation. This is a form that lets us review the lessons learned during the process, such as what worked well and what did not, so that we can repeat the good practices and learn from (and avoid) the bad ones.

When is this Project Complete?

This project is complete when all of the items listed under Project Acceptance, Maintenance and Support, and Post-Project Evaluation are done. After the implementation is over, the project will transition to maintenance mode, and the department (and IT) will abide by the maintenance agreement in further relations with the vendor.

Note: Throughout the project, all documentation should be imported / scanned into the EDMS. Signature forms should likewise be scanned, and copies provided to the Application Manager for filing. It is also recommended that the Project Leader keep a copy.

Software Shutdown

Software Shutdown is the process of shutting down, removing software from PCs, etc. when the software is no longer to be used. This also has a legal aspect, since there may be contract provisions that will need to be applied to the shutdown. Ideally, the information stored in the old system has been converted to the new system (in fact, the conversion should have been one of the requirements for switching to new software). The old system can be discontinued, shut down, eliminated, etc. pending the satisfaction of the questions below.

1. Complete implementation of new system that replaces the old one that is to be shut down.
2. Determine that users are aware that their old software will be removed.
3. Prepare the users for the shutdown:
   A. Have a representative of the users sign if necessary to indicate that they have no more need for the software. If there is reluctance, remind them of valid business reasons why this software must be decommissioned.
   B. If they request more time to "test" their new data, which can often be translated "we can't let go of it", then please set a firm date for shutdown.
   C. Request from the users a list of reports to be created from the old data. Once generated, these can be imported into EDMS or otherwise preserved to ease their transition off the system. This is a mandatory request since the new software may not permit querying in the same manner as the old system, so there is a valid reason to keep the old information in an available state for some time – just not active and running on the network.
4. Read the vendor contract and determine the methodology for informing the vendor that we no longer have a use for their software and that we should no longer be billed for maintenance. Indicate the anticipated date of shutdown.
5. Inform the vendor by the method indicated in the contract.
6. Prior to the shut-down date, ensure that the System Administrators have a backup of the data in the old system stored off-site (just in case).
7. On the date of the shut-down, inform the LAN group and other technical group personnel as necessary that the software in question can be shut down.
8. Execute the shutdown and inform the users that this system is no longer available for use.
9. Keep all documentation related to this software.

When Is This Project Complete?

This project can be considered when the software is no longer in use and the vendor has been notified that we are no longer using it.

Upgrades

This section to be completed later – MB.